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OFFICE OF THE SECRETARY

TIMOTHY FELDMAN
Vice President, Government Affairs

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July 8, 1998

Federal Communications Commission
1919 M Street N.W.
ET Docket 98-42, FCC 98-53
Washington, DC 20554

Re: Comments on FCC's Notice of Proposed Rule Making for Regulations for RF Lighting Devices

Dear Sir/Madam:

The National Electrical Manufacturers Association (NEMA) is pleased to submit these comments on behalf of the NEMA Lamp and Ballast Sections of the Lighting Systems Division.

NEMA is the largest trade association in the United States representing the interests of electroindustry manufacturers. Founded in 1926 and headquartered in Rosslyn, Virginia, its 575 member companies manufacture products used in the generation, transmission and distribution, control, and end-use of electricity. Annual shipments of these products total over $100 billion.

NEMA's mission is to improve the competitiveness of its member companies by providing services of high quality that will impact positively on standards and conformity assessment, legislation, global business trends and corporate leadership.

If you have any questions, please do not hesitate to call me at (703) 841-3251 or Anthony Balducci of my staff at (703) 841-3245.

Sincerely,

Timothy Feldman

National Electrical
Manufacturers Association

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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION

In the Matter of

Amendment of Part 18 of the Commission's Rules to Update Regulations for RF Lighting	)	ET Docket No. 98-42

COMMENTS OF THE LAMP AND BALLAST SECTIONS OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

July 8, 1998

BACKGROUND

The NEMA Lamp and Ballast Sections applaud the Commission's proactive stance in reviewing and updating the requirements for Part 18 RF lighting devices. NEMA and its members in the Lamp and Ballast Sections have a long history in working with the Commission to develop the existing Part 18 requirements for RF lighting devices. (See NEMA's original 87 page submission on the Commission's Notice of Inquiry that ultimately defined the current requirements- October 21, 1983, General Docket 83-806.)
The existing rules have allowed the RF lighting device industry and consumers to both benefit since the lack of interference from these products has in part been responsible for their current broad acceptance in the market place. On the other hand, as stated well by the Commission in its current Notice, the technology has continued to advance and evolve since 1983, and it is time one again to update several of the requirements to ensure that products that offer broad economic and environmental benefits to both the consumer and industry are allowed to be commercialized.

DISCUSSION

NEMA seeks to ensure that there is always the appropriate level of regulation necessary to protect communications services while simultaneously facilitating the development and use of the newest generation of RF lighting devices. We recognize that our customers expect both high levels of product performance as well as the ability to use those products without disruption of communications services.

Both the Commission and GE have stated the advantages to the new generation of electrodeless fluorescent lamps (EFLs), and those points will not be restated here.

In addition, Members of the NEMA Lamp Section previously supported the granting of the original waiver that is part of this Notice (See NEMA July 11, 1995 letter from Timothy Feldman to Richard M. Smith Chief, Office of Engineering and Technology).

The NEMA Lamp and Ballast Section offer instead a direct summation of points intended to help the Commission in its rulemaking. This Notice is of equal interest to both the Lamp and Ballast Section members since its proposed provisions and amendments would cover both screw-in RF lighting devices (CFLs and EFLs) and separable lamp-ballast types of RF lighting devices.

Consumer Conducted Limits in the 2.2-3.0 MHz Range

Members of the Lamp and Ballast Sections fundamentally agree that it is appropriate to relax the consumer line conducted emission limit in Section 307(c) by 22 dB in the 2.2-2.8 MHz band to the existing non-consumer limit of 3000 microvolts. As mentioned by the Commission in its Notice, this proposed level is very consistent with international IEC

CISPR standards that have been recently adopted in the same region of the spectrum. In addition, NEMA members urge the Commission to consider an even greater harmonization with the international requirements so that products can be developed that more readily serve the global consumers. This would mean modifying the region of the spectrum that would be affected by the proposed 3000 microvolt limits to coincide with the IEC CISPR frequency range of 2.51 through 3.0 MHz. This minor change to the Commissions proposal would greatly simplify conformance on an international basis, and, accordingly, would be in keeping with the spirit of recently published OMB Circular A-119 (Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities), which encourages Federal Agencies to consider using the results of consensus standards activities. Inasmuch as the international community, officially supported by the US National Committee of the IEC, which represents both private and government sectors, has already adopted a similar relaxation over the 2.51 through 3.0 MHz range, the Commission has ample justification for such a practical harmonization.

Advisory Information Requirement

NEMA Lamp and Ballast Section members also note that the advisory label that was required under the original provisions of the GE waiver seem to be overly complicated and burdensome. Members can understand the desire to provide an advisory but note that this requirement is covered adequately under Paragraph 18.213, Information to the User. If the Commission is still concerned about applications related to maritime use, then a simpler advisory can be phrased that would alert the consumer but not require such a large packaging requirement or additional literature insert. Such an advisory could be simple and very direct:

" Not for use on ships or aircraft."

Transient Phenomena

There is no evidence that transient phenomena from RF lighting devices, either in the turn-on or turn-off phase of operation, has led to any interference situations. Fluorescent lamps ionize and de-ionize very rapidly, so that any interference would typically occur in the more prevalent steady state mode of operation. If such transient behavior were ever shown to represent a problem, then requirements, including test methods, could be developed, but at this time there is no valid reason to consider the development of such requirements. Transient measurements are very difficult to make in an accurate fashion. Such a burdensome requirement should not be added to Part 18 unless very good cause can be demonstrated.

Microwave Lighting

NEMA Lamp and Ballast members support the updating of the FCC Rules to accommodate recent advances in so-called "microwave lighting", where RF lighting devices are being typically driven in the 2400 through 2500 MHz range and at relatively high power levels compared to other electrodeless lighting devices. Members agree with the Commission's belief that RF lighting rules should be updated to provide for the development of 2450 MHz lighting devices while still preventing harmful interference to other services. Because higher power lighting devices can still represent relatively large volumes in the market place, NEMA Lamp and Ballast members agree that some level of conducted emission limit should apply to all RF lighting devices but also support a relaxation of 10 dB for non-consumer devices. Such non-microwave driven RF lighting devices now number in the many millions in the field and have not been a source of interference (NEMA members estimate that approximately 30 million RF electronic ballasts will have been shipped into the non-consumer market over the 1995-1999 time period.). This proposed relaxation would benefit both microwave and non-microwave products since the Commission's proposed relaxation extends across the full frequency range for conducted limits, namely, 0.45-30 MHz.

Limits Above 1 GHz

NEMA members also contend that it is appropriate to extend radiated limits for RF lighting devices above 1 GHz for the reasons stated by the Commission. Since services are becoming increasingly common in the GHz band it is appropriate to provide the same type of radiated requirement above 1 GHz that is already in place for Part 15 digital devices. The levels proposed by the Commission seem reasonable, since, again, they are already in place for Part 15 digital devices. Although some RF lighting devices may operate at higher powers, they will tend to be spaced relatively far from potential communication devices. Without actual experience which can only come from the field it is reasonable to make the Part 15 and Part 18 requirements the same at this point in time for radiated limits above 1 GHz. The Commission should also specify that only RF lighting devices that contain microwave oscillators should need to measure emissions in the GHz range due to the complexity of making measurements in this region. The vast majority of lighting products will produce no significant emissions in this region and should not be burdened by this provision.

In-Band ISM Limits

Finally, NEMA Lamp and Ballast members do not believe in-band limits are justified for ISM frequency bands at this time. Instead the Commission is urged to allow the development of microwave lighting to proceed with the historical understanding that in band limits are not required but that out of band limits would apply. As microwave lighting develops the burden is clearly on the developers and users of such devices to ensure that there is no objectionable effect on services such as Mobile Satellite Service (MSS). If a pattern of interference starts to develop then requirements can quickly be imposed while remedial action is taken. Such high power microwave lighting devices will not reach the

volume levels of the lower power (and much lower cost) RF lighting devices. In addition there are certain fundamental limitations in the application of very high intensity light sources, such as the higher power microwave electrodeless variety, that will naturally limit the penetration of such products.

CONCLUSION

NEMA thanks the Commission for the opportunity to provide these comments on behalf of its Lamp and Ballast Section members. The Commission continues to be responsive in a model way not only to the needs of both the communications and RF lighting communities but in the manner in which it proactively seeks to protect communications services while always additionally striving to avoid the imposition of burdensome requirements. NEMA members appreciate the market driven philosophy of the Commission and hold this approach up to other Federal regulatory agencies as one to emulate.

The NEMA Lamp and Ballast Sections stand ready to discuss any of the foregoing comments in more detail if that would be of assistance to the Commission or FCC staff in this matter.